

We claim:

1. A device for conditioning the interconnect surfaces of a support structure, the support structure being configured to receive thereon an integrated circuit chip having bond pads which are to be connected to the interconnect surfaces, the device comprising:  
  
a first member; and  
  
a raised feature on a surface of the first member, the raised feature being of a pre-determined shape and location as to engage with the interconnect surfaces of the support structure when the member and the support structure are brought into contact with one another.
2. The device of claim 1 comprising a second member which second member supports the support structure when the first member and the support structure are brought into contact with one another.
3. The device of claim 1 further comprising a heating element which heating element heats at least one surface of one of the first and second members that contact the support structure.
4. The device of claim 1 wherein the raised feature is a single continuous feature.
5. The device of claim 1 wherein the raised feature comprises a plurality of features of substantially uniform height, which plurality of features collectively engage with the interconnect surfaces of the support structure.

6. The device of claim 1 wherein said second member comprises a raised feature on a surface, the raised feature being of a substantially similar shape as said raised feature on the surface of the first member.

7. The device of claim 1 further comprising a cavity within said surface of the first member, the cavity being aligned with the location of an integrated circuit chip located on the support structure.

8. The device of claim 1 further comprising a clamp mechanism to forcibly engage the first member with the support structure.

9. The device of claim 1 wherein said support structure is a lead frame.

10. The device of claim 1 wherein said support structure comprises a substrate having formed thereon a conductive trace.

11. A method of conditioning interconnect surfaces of a support structure comprising:

forming interconnect surfaces on the support structure;

positioning said support structure board in alignment with a personality kit such that the interconnect surfaces are substantially aligned with raised bosses on said personality kit;

clamping said personality kit onto said support structure such that the raised bosses forcibly engage with and deform each interconnect surface on said support structure substantially simultaneously; and

de-clamping said personality kit from said support structure.

12. The method of claim 11 further comprising heating said personality kit.
13. The method of claim 11 further comprising vibrating said personality kit or said support structure during said clamping step.
14. The method of claim 11 wherein said positioning step comprises aligning said support structure in at least two axes.
15. The method of claim 11 further comprising bonding a bond wire to at least one of said interconnect surfaces after said de-clamping step.
16. The method of claim 11 wherein said clamping step comprises moving said personality kit, or said support structure, or both, relative one another in a direction normal to the major surface until said personality kit and said support structure are forcibly engaged.

17. A wirebonder adapted to wire bond an integrated circuit chip to a substrate, the substrate having formed thereon a plurality of conductive traces, at least one of the conductive traces having a bond region containing a bond surface, the machine comprising:

a support structure positioning device;

a conditioning device positioned adjacent the support structure positioning device, the conditioning device and the support structure being movable relative to one another in a direction normal to the support structure, the conditioning device comprising:

a member;

a raised boss on the member, the raised boss being configured to compress bond surfaces on a top surface of the support structure when the conditioning device is engaged with the support structure;

a cavity located so as to receive therein an integrated circuit chip mounted on said support structure when the flexible member is engaged with the support structure; and

a bond wire capillary positioned over the circuit board clamp.

18. The machine of claim 17 further comprising a heater connected to the conditioning device.

19. The machine of claim 17 further comprising a vibrator connected to the conditioning device.

20. The machine of claim 17 further comprising a servo motor attached to the conditioning device, the servo motor moving the conditioning device relative the support structure positioning device.